Docket No. 02-IMP-037 EATNP139US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re **PATENT** application of:

Applicant:	Benveniste
Application No.:	10/669,186
For:	ION BEAM SLIT EXTRACTION WITH MASS SEPARATION
Filing Date:	September 24, 2003
Examiner:	David Vanore
Art Unit:	2881

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant submits this Reply Brief in response to the Examiner's Answer mailed April 22, 2006, in connection with the appeal of the above-identified case.

A. REJECTION OF CLAIMS 1, 21, and 29 UNDER 35 U.S.C. § 103(a)

Claims 1, 21 and 29 are rejected under 35 U.S.C.§ 103(a) as being unpatentable over Benveniste (USPN 5,554,857) in view of Davis (USPN 3,711,706) and Vahrenkamp (USPN 4,315,153). Reversal of the rejection is respectfully requested for at least the following reasons.

Applicant maintains that the suggested combination is not proper. For example, both Benveniste and Davis teach away from using permanent magnets, at least, because Benveniste does not disclose permanent magnets and Davis discloses a preference for non-permanent magnets (e.g., electromagnets) instead of permanent magnets (Col. 2, lines 35-51). Thus, any combination of the two (e.g., modifying Benveniste in view of Davis) to yield a resulting device that merely comprises permanent magnets (as provided in independent claims 1, 21 and 29) instead of electromagnets is believed to be improper.

It is respectfully submitted that the concern of Benveniste of adjusting the contents of an ion beam (Col. 1, lines 6-11) (and referenced in the Examiner's Answer) supports Benveniste's teaching of using an electromagnet and not a permanent magnet. For example, using an electromagnet instead of a permanent magnet allows fine tuning to be performed to better "adjust" the contents of the beam (Col. 1, lines 6-11). Substituting a permanent magnet for the electromagnet in Benveniste would detract from this capability. Thus, one of ordinary skill in the art would not be motivated to make such a modification.

Further, applicant maintains that is it clearly important to Benveniste to provide flexibility in an ion implantation system to allow an ion implanter to be used with different species of ions, and that this flexibility is made possible through the use of electromagnets (*See, e.g.*, Col. 2, lines 35-40; Col. 4, lines 24-27; Col. 5, line 54 – Col. 6, line 14). In particular, coils that are part of the electromagnets in Benveniste are discussed and are specifically employed to provide flexibility that allows resulting magnetic fields to be adjusted. Thus, one of ordinary skill in the art would not be motivated to modify Benveniste to include permanent magnets instead of electromagnets as this would remove a primary purpose of the system taught in Benveniste.

Moreover, stating that an electromagnet (e.g., that of Benveniste) can be turned off in an attempt to equate the resulting steady state performance of the electromagnet to a constant magnetic field produced by a permanent magnet is flawed, at least, because the deactivated electromagnet would no longer adjust the content of an ion beam (because the magnetic field would be gone). This would effectively render the ion implantation system useless for its intended purpose, not something that one of ordinary skill in the art would be motivated to do.

It is thus respectfully submitted that one of ordinary skill in the art would not be motivated to modify Benveniste by substituting a permanent magnet for an electromagnet (regardless of the teachings of Davis and/or Vahrenkamp) as this would be contrary to the teachings of Benveniste. Withdrawal of the foregoing rejection is thus respectfully requested since independent claims 1, 21 and 29 are believed to be non-obvious over the references cited.

B. CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of the pending claims be reversed.

For any extra fees or any underpayment of fees for filing of this Brief, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, EATNP139US.

Respectfully submitted,
ESCHWEILER & ASSOCIATES, LLC

/Thomas G. Eschweiler/
Thomas G. Eschweiler
Registration No. 36,981

National City Bank Building
629 Euclid Ave., Suite 1000
Cleveland, Ohio 44114
(216) 502-0600